

MYSIDOPSIS ALMYRA, A NEW ESTUARINE MYSID CRUSTACEAN
FROM LOUISIANA AND FLORIDA

THOMAS E. BOWMAN,
Division of Marine Invertebrates,
Smithsonian Institution,
Washington, D. C. 20560

ABSTRACT

Mysidopsis almyra is described from Lake Pontchartrain, Louisiana, St. Andrews Bay, Florida, and Buttonwood Canal, Florida.

Two species of *Mysidopsis* are known from the Atlantic and Gulf of Mexico coasts of the United States. *M. bigelowi* W. Tattersall (1926) occurs from New England to Louisiana, while *M. furca* Bowman (1957) is known only from the type-locality, off South Carolina. A third species, collected from brackish waters in Florida and Louisiana, is described below.

Mysidopsis almyra,¹ new species

Figures 1-24

Mysidopsis sp., Darnell, 1961, pp. 555-556.

Description. Length, from anterior margin of rostrum to end of telson, varies seasonally: 8.1-9.4 mm in 6 adults collected 19 Feb. 1954, 4.2-5.3 mm in 5 adults collected 30 July 1953 in Lake Pontchartrain, Louisiana. Anterior margin of carapace broadly round-triangular, not produced between eyes as rostrum; anterolateral angles rounded; posterior margin evenly concave, thoracic somite 8 and a small portion of thoracic somite 7 exposed in dorsal view. Eye large, cornea kidney-shaped, without ocular papilla. Telson slightly shorter than pleonite 6, linguiform, with broadly rounded apex; lateral margins each with about 20 spines along entire length; apex with 6-7 pairs of closely set long strong spines, central pair longest,

about 1/4 as long as telson. First segment of peduncle of antenna 1 longer than third, with rounded lobe bearing long recurved setae arising from inner distal angle; male lobe slender, about as long as first segment, inner margin thickly set with setae. Scale of antenna 2 narrowly lanceolate, 2-segmented, distal segment about 0.4 as long as proximal; distal segment of peduncle produced into spine on outer distal corner. Labrum rounded anteriorly; posterior margin with small central margination; middle 2/3 armed with short setae. Molar of mandible obsolete; incisor curved so that in some views it appears bipartite, with 9 teeth in left mandible, 5 teeth in right; left lacinia mobilis broad, with 6 teeth; right lacinia much smaller, constricted at base, with 5 teeth; spine row of 7-8 spines, with numerous setae interspersed among spines; palp well developed. Outer plate of maxilla 1 with 9 spines at apex; inner plate with 2 setae at apex and 1 on outer margin. Proximal lobe (lobe of second segment) of maxilla 2 with 4 setae on truncate apex; exopod with 4 setae. Thoracic leg 1 (maxilliped) short and stout. Leg 2 (endopod of 2nd thoracic appendage) slender; segment 6 slightly longer than segment 5; segment 7 ending in nail, posterior margin with 4 robust long barbed setae, anterior margin with about 10 long naked setae. Legs 3-7 slender, subequal; tarsus of 2 segments, first about 4 times as long as second; prehensile distal end formed by long slender dactyl and 5 long setae, 4 inserted at distal end of first and 1 at distal end of second tarsal segment.

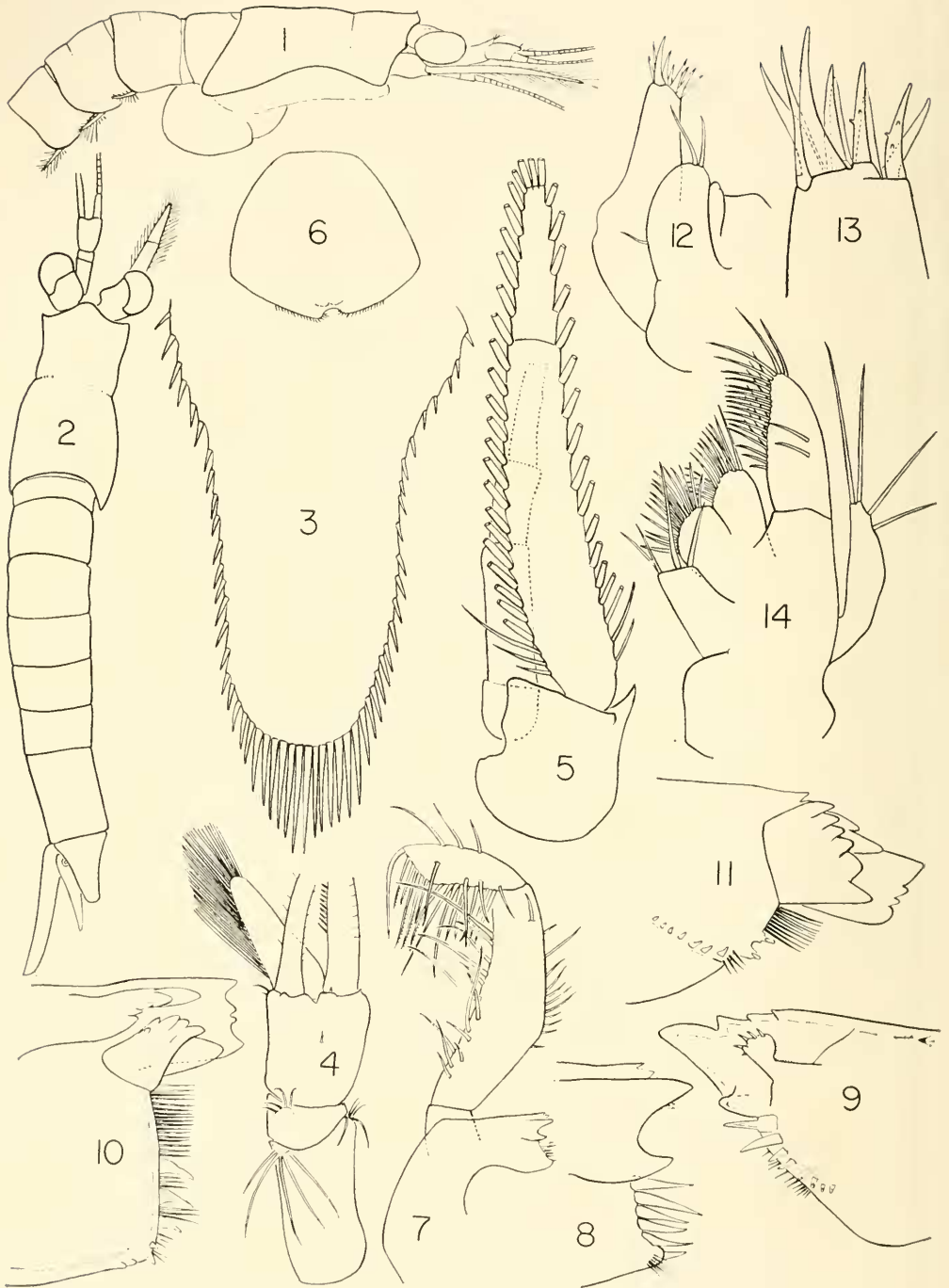
¹ From the Greek *αλμυρός*, brackish.

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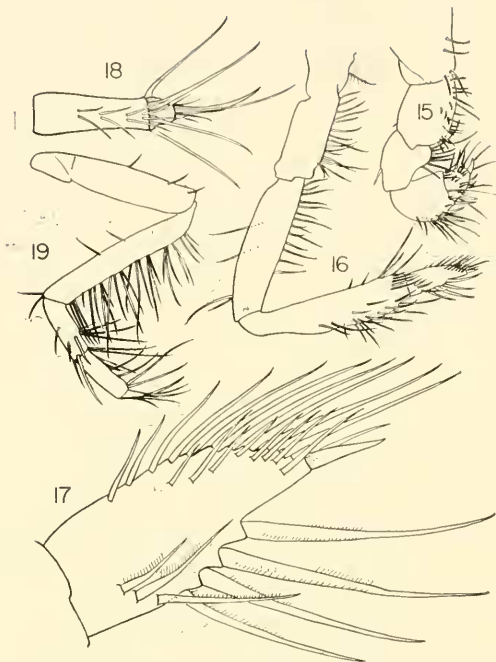
Figures 1-14. *Mysidopsis almyra*, new species: 1. anterior part of female, lateral; 2. male, dorsal; 3. telson, dorsal; 4. male antenna 1, proximal segments, dorsal; 5. scale of female antenna 2, dorsal; 6. labrum; 7. right mandible, gnathobasic process, external view; 8. right mandible, gnathobasic process, internal (dorsal) view; 9. same, internal (dorsal) view; 10. left mandible, gnathobasic process, internal view; 11. same, oblique internal view; 12. maxilla 1; 13. maxilla 1, outer plate; 14. maxilla 2.

Leg 8 much shorter than other legs. Male pleopod 1 with lobe bearing 6 setae at base of endopod. Endopod of male pleopod 4 with 2 lobes bearing 1 and 6 setae respectively; exopod longer than endopod, with long barbed robust apical spine. Exopod of uropod about twice as long as telson (excluding terminal spines), curved gently outward; endopod about $3/4$ as long as exopod, armed on ventral surface near medial margin distal to statocyst with a single long spine.

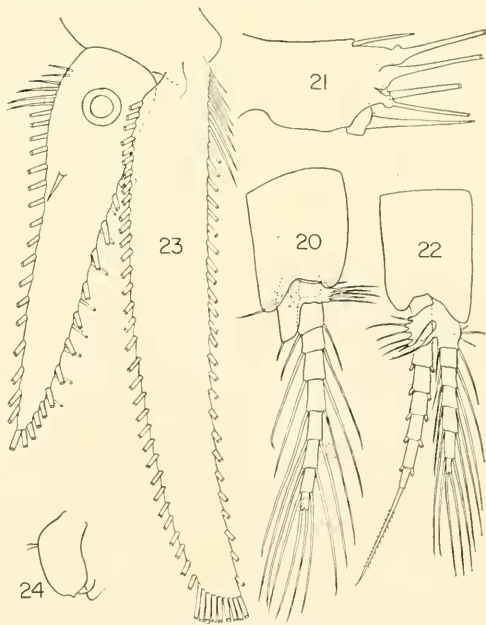
Color. In preserved specimens black chromatophores are distributed as follows: Dorsally, 1 pair at base of telson; ventrally 2 pairs on thorax, 1 in midline near posterior margin of pleonites 1-5, 1 on each posterior oostegite near base.

Types. Male holotype, USNM 110924, female allotype, USNM 110925, and 8 paratypes, from station A. I. 188, 2.4 km offshore from the mouth of Bayou St. John, Lake Pontchartrain, Louisiana, collected 28 Dec. 1953, by Reznear M. Darnell. More than 450 specimens collected by Dr. Darnell from other stations in Lake Pontchartrain in 1953-54 have also been designated as paratypes.

Occurrence. In addition to the specimens from Lake Pontchartrain, I have identified specimens of *M. almyra* from St. Andrews Bay, Florida, collected by Thomas L. Hopkins, and from the north end of Buttonwood Canal, connecting Florida Bay at Flamingo with Coot Bay, in the Cape Sable region of southern Florida, collected by Raymond B. Manning (*cf.* Tabb and Manning, 1961; Tabb, Dubrow, and Manning, 1962). At all 3 localities the salinity is low, at least seasonally. At the Lake Pontchartrain stations from which I have specimens of *M. almyra*, the salinity varied from 2.0-5.2‰, and Darnell (1958) reports a salinity during his study (July 1953 to August 1954), of 1.2-18.6‰, with an average of less than 6‰ and a maximum of less than 9‰ for most months. In the St. Andrews Bay system the salinity ranges from low values in the upper reaches to values only slightly below full ocean salinity in St. Andrews Bay proper, West Pass, and East Pass (Jones and Ichiye, 1960; Ichiye and Jones, 1961). Specimens of *Mysidopsis almyra* were collected by Hopkins at stations S3 and S5 (Hopkins, 1963) in St. Andrew Bay and West Pass respectively, and the salinities at the times of collection were 33.1‰ and



Figures 15-19. *Mysidopsis almyra*, new species: 15. leg 1; 16. leg 2; 17. leg 2, distal segment; 18. leg 3, distal segments, viewed from above; 19. leg 8.



Figures 20-24. *Mysidopsis almyra*, new species: 20. pleopod 1, male; 21. pleopod 1, male, endopodal lobe; 22. pleopod 4, male; 23. left uropod, ventral; 24. genital appendage, male.

27.3-33.7‰ respectively (Hopkins, in litt.). At the site of collection in Buttonwood Canal the salinity undergoes marked fluctuations, varying from less than 18‰ to more than 40‰ (Tabb, Dubrow, and Manning, 1959).

Mysidopsis almyra is very abundant in Lake Pontchartrain. Quoting Darnell (1961), the zooplankton "is dominated by the calanoid copepod (*Acartia tonsa*) and to a lesser extent by adult schizopods (*Mysidopsis* sp.) and larval penaeid shrimp." *M. almyra* is an important item in the diet of a number of Lake Pontchartrain fishes (Darnell, 1958). Both young and adult *Anchoa mitchilli diaphana* feed on this mysid; in other fishes (*Ictalurus furcatus*, *Cynoscion arenarius*, *C. nebulosus*, *Micropogon undulatus*, *Sciaenops ocellatus*) only the young specimens feed on *Mysidopsis*, the older individuals turning to larger prey. Finally, the young of some fishes (*Menidia beryllina* and *Bairdiella chrysura*) prey mostly on copepods; as these fishes grow older, they come to depend more on mysids.

Remarks. Only 3 species of *Mysidopsis*, *M. angusta* G. O. Sars, *M. didelphys* Norman, and *M. indica* W. Tattersall, have a single spine on the uropodal endopod near the statocyst. These species differ from *M. almyra* in having very short distal segments of the antennal scales and 3-segmented tarsi on thoracic legs 3-8, and their telsons are quite different. Only 1 species of *Mysidopsis*, *M. bigelowi* W. Tattersall, has been reported from the Gulf of Mexico: Tattersall (1951) reports it from Calcasieu Pass, Louisiana (I have examined these specimens and confirm his identification); Clarke (1956) records it from 10 miles off Barataria Light, Louisiana, and the U. S. National Museum has a single specimen collected by the M/V Silver Bay off southern Florida (26°20'N, 83°02'W). *M. bigelowi* is easily distinguished from *M. almyra* by its smaller eye, unsegmented antennal scale, the very robust thoracic leg 2, the presence of

5 spines near the statocyst, and the armature of the telson.

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